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10/783,624	02/20/2004	Ricardo E. Paxson	MWS-110RCE	7212

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EXAMINER	
SIMS, JASON M	

ART UNIT	PAPER NUMBER
1631	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/783,624	PAXSON ET AL.	
	Examiner	Art Unit	
	JASON M. SIMS	1631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 June 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22 and 45-48* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22 and 45-48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/9/2008 has been entered.

Applicant has newly added claim 48 in the response filed 6/9/2008, which is acknowledged and entered.

Claims 1-22 and 45-48 are the current claims hereby under examination.

Claim Rejections - 35 USC § 101-maintained

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-22 and 45-48 are drawn to a process and/or system. A statutory process or a system that embodies a statutory process must include a final resulting step of a physical transformation, or produce a useful, concrete, and tangible result (State Street Bank & Trust Co. v. Signature Financial Group Inc. CAFC 47 USPQ2d 1596 (1998), AT&T Corp. v. Excel Communications Inc. (CAFC 50 USPQ2d 1447 (1999)). Furthermore, a system w/out any physical limitations, which recites only "instructions" type of limitations encompasses a program, per se. A program, per se, is not statutory subject matter. The instant claims do not result in a physical

transformation, thus the Examiner must determine if the instant claims include a useful, concrete, and tangible result.

As noted in State Street Bank & Trust Co. v. Signature Financial Group Inc. CAFC 47 USPQ2d 1596 (1998) below, the statutory category of the claimed subject matter is not relevant to a determination of whether the claimed subject matter produces a useful, concrete, and tangible result:

> The question of whether a claim encompasses statutory subject matter should not focus on *which* of the four categories of subject matter a claim is directed to 9.– process, machine, manufacture, or composition of matter–but rather on the essential characteristics of the subject matter, in particular, its practical utility. Section 101 specifies that statutory subject matter must also satisfy the other "conditions and requirements" of Title 35, including novelty, nonobviousness, and adequacy of disclosure and notice. *See In re Warmerdam*, 33 F.3d 1354, 1359, 31 USPQ2d 1754, 1757-58 (Fed. Cir. 1994). For purpose of our analysis, as noted above, claim 1 is directed to a machine programmed with the Hub and Spoke software and admittedly produces a "useful, concrete, and tangible result." *Alappat*, 33 F.3d at 1544, 31 USPQ2d at 1557. This renders it statutory subject matter, even if the useful result is expressed in numbers, such as price, profit, percentage, cost, or loss.

In determining if the claimed subject matter produces a useful, concrete, and tangible result, the Examiner must determine each standard individually. For a claim to be "useful," the claim must produce a result that is specific, and substantial. For a claim to be "concrete," the process must have a result that is reproducible. For a claim to be "tangible," the process must produce a real world result. Furthermore, the claim must be limited only to statutory embodiments.

Claims 1-22 and 45-48 do not produce a tangible result. A tangible result requires that the claim must set forth a practical application to produce a real-world result. For the instant claims there is a step that recites "generating as output dynamic behavior of the biological system." However, it is unclear as to where the output data is going. For example, the output may be input data for another simulation prior to being available to a user, which in that case the step would remain reading on non-statutory subject matter for failing to produce a tangible result. Furthermore, the amended step of "a storage component for storing the graphical model of the biological system" does not necessitate the storage of the final resulting method step. Therefore, the storage component for storing the graphical model does not necessarily store the resulting data of the improved simulation. This rejection could be overcome by amendment of the claims to recite that a result of the method is outputted to a display or to a user, or by including a final resulting step of a physical transformation, if such wording is supported by the instant specification.

Response to Arguments:

Applicant's arguments filed 11/16/2007 have been fully considered but they are not persuasive.

Applicant argues that the amended step of "store the dynamic behavior of the biological system in the storage," "storing the dynamic behavior of the modeled biological system in a storage," "means for storing the dynamic behavior of the modeled biological system in a storage," and "instructions for storing the recalculated and sorted putative reaction times in a storage" cause the instant claims to now be drawn to statutory subject matter.

Applicant's arguments are not found persuasive. It is appreciated that applicant's have amended their claims in an attempt to overcome the instant rejection of claims under 35 USC 101. However, the amended steps of "store the dynamic behavior of the biological system in the storage," "storing the dynamic behavior of the modeled biological system in a storage," "means for storing the dynamic behavior of the modeled biological system in a storage," and "instructions for storing the recalculated and sorted putative reaction times in a storage" do not necessitate the final resulting method step to being tangible. It remains unclear as to what is being done with the stored data in each of the amended steps. For example, the stored data may be input data for another simulation or data manipulation program prior to being available to a user, which in that case the step would remain reading on non-statutory subject matter for failing to produce a tangible result. Furthermore, the storage, recited in each of the claim amendments does not necessitate a more permanent storage medium, such as a physical medium. The storage recited in the claim amendments is broadly interpreted as reading on a temporary storage, such as a carrier wave, wherein carrier waves read on non-statutory subject matter.

Claim Rejections - 35 USC § 112-first paragraph

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 45 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim **45** recites various "means for" clauses. The means for constructing a graphical model of the biological system including a first chemical reaction and a second chemical reaction and means for generating dynamic behavior of the modeled biological system using a first type of computation model for the first reaction lack specific related structures in the specification. No specific **[computer, apparatus, system]** structures for performing these means are disclosed. See MPEP 2181: 35 U.S.C. 112, sixth paragraph states that a claim limitation expressed in means-plus-function language "shall be construed to cover the corresponding structure...described in the specification and equivalents thereof." "If one employs means plus function language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language. If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112." In re Donaldson Co., 16 F.3d 1189, 1195, 29 USPQ2d 1845, 1850 (Fed. Cir. 1994) (in banc)... Whether a claim reciting an element in means- (or step-) plus-function language fails to comply with 35 U.S.C. 112, second paragraph, because the specification does not disclose adequate structure (or material or acts) for performing the recited function is closely

related to the question of whether the specification meets the description requirement in 35 U.S.C. 112, first paragraph. See In re Noll, 545 F.2d 141, 149, 191 USPQ 721, 727 (CCPA 1976) (unless the means-plus-function language is itself unclear, a claim limitation written in means-plus- function language meets the definiteness requirement in 35 U.S.C. 112, second paragraph, so long as the specification meets the written description requirement in 35 U.S.C. 112, first paragraph)... the invocation of 35 U.S.C. 112, sixth paragraph, does not exempt an applicant from compliance with 35 U.S.C. 112, first and second paragraphs. See Donaldson, 16 F.3d at 1195, 29 USPQ2d at 1850; Knowlton, 481 F.2d at 1366, 178 USPQ at 493.

Claim Rejections - 35 USC § 112-second paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 45 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As set forth above, claim 45 recite various "means for" clauses. The specification as filed does not set forth specific structures for performing the means recited. The means for constructing a graphical model of the biological system including a first chemical reaction and a second chemical reaction lack specific related structures in the specification. See MPEP 2181: 35 U.S.C. 112, sixth paragraph states that a claim limitation expressed in means-plus-function language "shall be construed to cover the

corresponding structure…described in the specification and equivalents thereof." "If one employs means plus function language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language. If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112." In re Donaldson Co., 16 F.3d 1189, 1195, 29 USPQ2d 1845, 1850 (Fed. Cir. 1994) (in banc). One of skill in the art would not necessarily be apprised of the specific structures to be used in the claimed apparati. For example, one of ordinary skill in the art may know what available software programs are available that may perform the recited means plus function language, but would not know what particular program was used in the instant invention.

The following rejection is being modified as necessitated by amendment:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-22 and 45-48 are rejected under 35 U.S.C. 102(a) as being anticipated by Sauro et al. (2003).

Sauro et al show a system, computer-implemented method, and computer program product for improved modeling of a biological system, a biological system being a plurality of chemical reactions, comprising modeling component with a graphical

user interface (GUI) to generate a model; a simulation engine accepting the model and generating a dynamic behavior for the biologic system; and an analysis environment to display the dynamic behavior (figure 11). In figure 11 and figure 12 of Sauro et al, the elements of modeling component having a GUI providing means for accepting user input via a tool palette to generate a block diagram of a plurality of related chemical reactions that make a biological system. The figure also depicts an analysis environment displaying the dynamic behavior of the biological system, and a simulation engine. Sauro et al show that the dynamic behavior of the system is modeled using a stochastic computational model (p 355 and 364). Sauro et al. discloses the capabilities of simulating the dynamic behavior along with the ease of annotating and editing within the JDesigner environment. Moreover, Sauro teaches at page 364 that Jarnac enables modifying, through the SBW interface, the parameters and initial conditions, i.e. annotating the graphical model in response to a user requesting to add annotations to the model that are provided by the user. In addition, Sauro teaches that JDesigner also has annotating capabilities to support layout information upon request by a user. Furthermore, the JDesigner environment works well with the Jarnac environment to build an easy to use systems biology development environment. With regards to applicant's newly added means plus functional language in claim 45, Suaro teaches at page 365, first two lines, that the Jarnac application has the means for generating dynamic behavior ob the modeled biological system, which actually carries out the simulation.

Response to Arguments

Applicant's arguments filed 6/9/2008 have been fully considered but they are not persuasive.

Applicant argues that Sauro does not disclose or suggest:

1) a graphical model including a specified constraint provided in addition to the first and second chemical reactions that constrains dynamic behavior of the biological system; and

2) a processor configured to generate as output dynamic behavior of the biological system using a first type of computational model for the first chemical reaction, a second type of computational model for the second chemical reaction, and specified constraint.

Applicant's arguments with respect to point 1) are not found persuasive because Applicant does not define the word "constraint," but in the instant specification gives an example of a constraint at paragraph [0092], which states the class of ordinary differential equations may require additional equations to define the system being modeled. For example, equations called projections may be required to impose constraints on the differential variables. These constraints can be applied as a coupled condition to the differential equation. Furthermore at paragraph [0108] the term "constraint" is used with respect to time to break in a breaking system. Therefore, the word "constraint is being broadly and reasonably interpreted as anything that may be applied that may affect or influence the object it is being applied.

Sauro at page 364, paragraph 4 teaches about the Jarnac application within the BIOSPICE framework, which loads models into the user SBW interface. The models

comprise reactions, which simulate a system. Furthermore, the models comprise equations, rate law expressions, a list of any conservation laws, and methods to allow the modification to parameters and initial conditions, wherein the parameters and conditions read on constraints being applied to the chemical reactions. Therefore, the Jarnac application taught by Sauro reads on a graphical model including a specified constraint provided in addition to the first and second chemical reactions that constrains dynamic behavior of the biological system.

Applicant's arguments with respect to point 2) are not found persuasive because Jarnac as taught by Sauro can be a single model, i.e. the SBW interface can load one or more models, and can run a single model or multiple models together, wherein each model may comprise single reactions or many reactions. Furthermore, Sauro at page 364, section Designer, teaches about JDesigner, which is a model design tool for editing biochemical networks visually, wherein the models comprise chemical reactions and rate laws. Sauro at page 364, further teaches the JDesigner tool interacts with the Jarnac application, which can load the models, modify, and/or run the models through the SBW interface. Furthermore, Fig. 11, shows the Jarnac and JDesigner applications together and displaying the results from a simulation. Therefore, Sauro teaches the limitaions of point 2).

Applicant further argues that Sauro does not teach a processor configured to perform points 1) and 2).

Applicants arguments are not persuasive as Fig. 11 illustrates a processor configured to perform points 1) and 2) by the nature of it being generated. The

BIOSPICE framework is a set of software applications developed to run on a computer, which inherently comprises a storage and processor. Sauro at page 354, first paragraph, lines 3-4, teaches that software was developed to input models into a computer. Furthermore, a computer capable of running the instant BIOSPICE framework, which comprises the Jarnac and JDesigner environments, necessarily is configured to performing points 1) and 2) as discussed above. Moreover, Sauro, at page 355, first paragraph, teaches that BioSpice is a toolset for modelling dynamic cellular network functions.

Applicant presents similar arguments with respect to claims 9, 16, and 45, which have been addressed above with respect to claim 1. Therefore, applicant's arguments with respect to claim 9 are not found persuasive for the same reasoning as presented above in the instant office action.

Applicant argues that Sauro does not teach executing one of the first chemical reactions and the second chemical reaction identified by a first reaction, the first chemical reaction being executed using a first type of computational model concurrently with the second chemical reaction being executed using a second type of computational model.

Applicant's arguments are not found persuasive because Sauro at page 364 teaches JDesigner, where a model describing chemical reactions is entered along with rate laws. JDesigner then stores each of the created models, which each comprises representations of chemical reactions. Sauro at page 364, teaches Jarnac, which loads each of the models and can modify constraining parameters, simulation times, and

initial conditions and run each of the models simultaneously through the SBW interface, which reads on executing one of the first chemical reactions and the second chemical reaction identified by a first reaction, the first chemical reaction being executed using a first type of computational model concurrently with the second chemical reaction being executed using a second type of computational model.

The following rejection has been modified as necessitated by amendment:

Claims 1-5, 8-11, 14-17, 20-22, 45, 48 are rejected under 35 U.S.C. 102(b) as being anticipated by Hucka et al. (Pacific Symposium on Biocomputing Vol. 7, p.450-461, 2002).

The claims are directed to a system computer implemented method and computer program product for improved modeling of a biological system, a biological system being a plurality of chemical reactions, comprising modeling component with a graphical user interface to generate a model; a simulation engine accepting the model and generating a dynamic behavior for the biologic system; and an analysis environment to display the dynamic behavior.

Hucka et al. show a system, computer-implemented method, and computer program product for improved modeling of a biological system, a biological system being a plurality of chemical reactions, comprising modeling component with a graphical user interface to generate a model; a simulation engine accepting the model and generating a dynamic behavior for the biologic system; and an analysis environment to display the dynamic behavior (figures 1 and 2). Hucka et al. describe Jdesigner, a

software providing a GUI to accept user commands and data (sect. 5.2). Jdesigner provides a tool palette aiding in the construction of the of a block diagram model, as is seen in figure 1 (figure 1 and p. 452). As shown in figure 1, the modeling component includes a block diagram of related chemical reactions. Hucka et al. show that the simulation engine, generates the dynamic behavior of the system using a stochastic computational model (p. 459, sect 5.8-9). Huck et al. also teaches at page 450, several programs for generating the dynamic behavior, such as Jarnac and Virtual Cell, which reads on the means plus functional language of amended claim 45.

Response to Arguments

Applicant's arguments filed 6/9/2008 have been fully considered but they are not persuasive.

Applicant argues that Hucka et al. does not disclose or suggest:

1) a graphical model including a specified constraint provided in addition to the first and second chemical reactions that constrains dynamic behavior of the biological system; and

2) a processor configured to generate as output dynamic behavior of the biological system using a first type of computational model for the first chemical reaction, a second type of computational model for the second chemical reaction, and specified constraint.

Applicant's arguments with respect to point 1) are not found persuasive because Applicant does not define the word "constraint," but in the instant specification gives an example of a constraint at paragraph [0092], which states the class of ordinary

differential equations may require additional equations to define the system being modeled. For example, equations called projections may be required to impose constraints on the differential variables. These constraints can be applied as a coupled condition to the differential equation. Furthermore at paragraph [0108] the term "constraint" is used with respect to time to break in a breaking system. Therefore, the word "constraint is being broadly and reasonably interpreted as anything that may be applied that may affect or influence the object it is being applied.

Hucka et al. at section 5.7 teach a graphical user interface that enables users to set up simulation runs, edit parameters, or variables, i.e. constraints for the chemical reactions, and plot the resulting run. The graphical user interface is a graphical model of the imported JDesigner models, which comprise chemical reactions as taught in section 5.2. The JDesigner model stores each of the created models, which may comprise one or more chemical reactions. Furthermore, the interface, which runs similarly to Jarnac, can load the one or more models and run them. Furthermore, Hucka et al. at section 5.6 teaches MATLAB model generator, which enables analysis of the models created in JDesigner, i.e. create the ordinary differential equations used to simulate the chemical reactions, which comprise each of the models, which reads on point 1) of applicant's arguments.

Applicant's arguments with respect to point 2) are not found persuasive because Hucka et al. at section 5.7 teach a graphical user interface that enables users to set up simulation runs, edit parameters, or variables, i.e. constraints for the chemical reactions, and plot the resulting run, i.e. generate as output dynamic behavior of the biological

system. Furthermore, the user interface working analogously to Jarnac, may run the one or more loaded models created in JDesigner, wherein the models each may comprise one or more chemical reactions along with edited parameters or variables, i.e. constraints for each of the chemical reactions, which reads on point 2) of applicant's arguments.

Applicant further argues that Hucka et al. does not teach a processor configured to perform points 1) and 2).

Applicant's arguments are not found persuasive as Hucka et al. at page 451, lines 1-7 teach that the variety of applications are configured to run on a variety of platforms, i.e. processors such as windows and/or linux and allow communication between processes across a network on different hardware and operating systems, which reads on a processor configured to perform points 1) and 2).

Applicant presents similar arguments for Huck et al. not teaching claims 9 and 16, which have been addressed above in the instant office action.

Applicant's arguments with respect to the rejection of claims 23, 26-29, and 32-35 as being previously cancelled claims has been found persuasive and the rejection of said claims has been withdrawn.

The following Double Patenting has been modified to incorporate the newly added claim 48, which has been necessitated by amendment.

Double Patenting-Maintained

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-22 and 45-48 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-19, 26 and 64 of copending Application No. 10/783,628. Although the conflicting claims are not identical, they are not patentably distinct from each other.

In the instant case the claims are drawn system computer implemented method and computer program product for improved modeling of a biological system, a biological system being a plurality of chemical reactions, comprising modeling component to generate a model; a simulation engine accepting the model and generating a dynamic behavior for the biologic system; and an analysis environment to

display the dynamic behavior. This method with specific steps anticipates the method of the instant claims.

In comparison the claims of copending Application No. 10/783,628 are drawn system computer implemented method and computer program product for improved modeling of a biological system, a biological system being a plurality of chemical reactions, comprising modeling component to generate a model; a simulation engine accepting the model and generating a dynamic behavior for the biologic system; and an analysis environment to display the dynamic behavior. This method with specific steps anticipates the method of the instant claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-22 and 45-48 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-19, 32, and 38-39 of copending Application No. 10/783,552. Although the conflicting claims are not identical, they are not patentably distinct from each other.

In the instant case the claims are drawn to a system, computer implemented method and computer program product for improved modeling of a biological system, a biological system being a plurality of chemical reactions, comprising modeling component to generate a model; a simulation engine accepting the model and generating a dynamic behavior for the biologic system; and an analysis environment to

display the dynamic behavior. This method with specific steps anticipates the method of the instant claims.

In comparison the claims of copending Application No. 10/783,552, are directed to a system computer implemented method and computer program product for improved modeling of a biological system, a biological system being a plurality of chemical reactions, comprising modeling component with a graphical user interface to generate a model; a simulation engine accepting the model and generating a dynamic behavior for the biologic system; and an analysis environment to display the dynamic behavior.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments:

Applicant has stated they will submit a terminal disclaimer if the instant claims are deemed allowable.

Conclusion

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Sims, whose telephone number is (571)-272-7540.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Marjorie Moran can be reached via telephone (571)-272-0720.

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the Central PTO Fax Center. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61

(November 16, 1993), and 1157 OG 94 (December 28, 1993) (See 37 CFR § 1.6(d)). The Central PTO Fax Center number is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

// Jason Sims //

/Michael Borin, Ph.D./
Primary Examiner, Art Unit 1631